



**Responsiveness Summary for the Waste Treatment  
and Immobilization Plant Modification of the Hanford  
Facility Resource Conservation and Recovery Act  
Permit, March 2003**

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Nuclear Waste Program

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**RESPONSIVENESS SUMMARY FOR THE WASTE TREATMENT  
AND IMMOBILIZATION PLANT MODIFICATION OF THE HANFORD  
FACILITY RESOURCE CONSERVATION AND RECOVERY ACT  
PERMIT, MARCH 2003**

**INTRODUCTION**

This Responsiveness Summary is a result of written comments on the Draft Modification of the *Dangerous Waste Portion of the Hanford Facility Resource Conservation and Recovery Act Permit* (Permit) which was available for public comment between December 16, 2002, and January 31, 2003. The purpose of the Permit modification was to incorporate the Waste Treatment and Immobilization Plant (WTP) design information contained in Design Package PTF-001. It also includes minor changes to Permit conditions to clarify the timing of leak detection system information submittals. The Responsiveness Summary consists of this Introduction, the Response to Comments, and a copy of all public comments received on the draft Permit modification.

The Permit is comprised of six (6) Parts. Parts I and II consist of general conditions that apply to all Hanford regulated dangerous waste treatment, storage, and/or disposal (TSD) units. Part III contains unit-specific conditions for final status operations. Part IV contains unit-specific conditions covering corrective actions. Part V provides unit-specific conditions for units undergoing closure. Part VI provides unit-specific conditions for units in post-closure. This WTP modification will add Permit-required information into appendices in Chapter 10, Attachment 51, and modify WTP unit-specific conditions in Chapter 10 of Part III.

The Washington State Department of Ecology (Ecology) received comments from the United States Department of Energy, Office of River Protection (ORP). Many issues raised by the Permittees are valid concerns and the changes made to the Permit modification based on these comments reflect Ecology's willingness to consider and incorporate the Permittees' suggestions where appropriate. Permits are based on the regulations and information submitted by the Permittees. While input from the Permittees is factored into the Permit, Ecology is responsible for setting the final Permit conditions. The comments were of considerable help in assisting Ecology to make the Permit conditions clear and more effective in meeting the requirements of the regulations. No public hearing was held on this modification because it was not requested by the public, or the Permittees, during the public comment period.

Ecology also made some format and editorial changes to the draft Permit conditions (e.g., ensuring all numbering is consistent throughout the Permit modification, addition/deletion of commas, periods, correcting typographical errors, etc.). These changes are made throughout the Permit conditions and are not specifically identified in the following comments. Ecology considers these changes as administrative in nature and no further reference to them is made, with the exception of Condition III.10.C.2.1., which is addressed at the end of the Responsiveness Summary under **OTHER ECOLOGY CHANGES/CLARIFICATIONS**.

This Responsiveness Summary is intended to address all public comments received and show how those comments were evaluated. The comments are listed in the order in which they were received. This Responsiveness Summary will be made part of the Hanford Facility Administrative Record for future reference.

**COMMENTOR:**

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**Comment 1:** It is more appropriate for leak detection information to be submitted pursuant to permit conditions for ancillary equipment. Please make the following changes:

- Leak detection information proposed to be submitted pursuant to condition III.10.E.9.b.x through xiii should be submitted pursuant to “new” condition III.10.E.9.d.xiii through xvi. Please move added text from III.10.9.b.x through xiii to new III.10.E.9.d.xiii through xvi.
- Leak detection information proposed to be submitted prior to construction of a containment building unit containment system pursuant to condition III.10.F.7.c.ix through xii should be submitted prior to installing the leak detection system equipment. Please modify III.10.F.7.c.ix through xii to require submittal prior to installing the leak detection system equipment. Proposed rewording follows:

ix. Prior to installation, ~~L~~leak detection system documentation (e.g. vendor information, etc.) consistent with information submitted under i. above, shall be submitted for incorporation into the Administrative Record;

x. Prior to installation, the Permittees shall submit ~~L~~leak detection system instrumentation control logic narrative description (e.g., softwaree.g., software functional specifications, descriptions of fail-safe conditions, etc.);

xi. Prior to installation, ~~S~~system ~~D~~descriptions related to leak detection systems (including instrument control logic and narrative descriptions) shall be submitted for incorporation into the Administrative Record;

xii. For leak detection system instrumentation for containment buildings as identified in Permit Tables III.10.F.D., a detailed description of how the leak detection system

instrumentation will be installed and tested [40 CFR 264.1101(b)(3) in accordance with WAC 173-303-695] shall be submitted prior to installation.

- Leak detection information proposed to be submitted pursuant to condition III.10.G.10.b.x through xiii should be submitted pursuant to “new” condition III.10.G.10.d.xiii through xvi. Please move added text from III.10.G.10.b.x through xiii to new III.10.G.10.d.xiii through xvi.
- Leak detection information proposed to be submitted pursuant to condition III.10.H.5.b.x through xiii should be submitted pursuant to “new” condition III.10.H.5.d.xiii through xvi. Please move added text from III.10.H.5.b.x through xiii to new III.10.H.5.d.xiii through xvi.
- Leak detection information proposed to be submitted pursuant to condition III.10.J.5.b.x through xiii should be submitted pursuant to “new” condition III.10.J.5.d.xiii through xvi. Please move added text from III.10.J.5.b.x through xiii to new III.10.J.5.d.xiii through xvi.

**Ecology Response:** After the initial issuance of the final WTP Permit in September 2002, Ecology realized that the Permit conditions regarding submittal of leak detection design information were not specific and could be misinterpreted. In order to rectify the situation, Ecology revised the existing Permit conditions to more specifically identify submittal of leak detection information and included them in this draft Permit modification. Ecology elected to require the submittal of this information with the secondary containment design information packages.

A number of meetings were held with the Permittees to discuss the timing of the leak detection information submittals. The Permittees never questioned the substantive requirements of conditions, only the timing of the submittals. The Permittees claimed that the leak detection information would not be available for submittal with the secondary containment information. The information would be available for submittal with the ancillary equipment submittal packages (for Pretreatment Plant Miscellaneous Units and Low Activity Waste (LAW) and High Level Waste (HLW) Vitrification Systems, leak detection information will be submitted with equipment and sub-system equipment design package submittals). Moving the leak detection information into the equipment packages would relieve them of the administrative burden of tracking partial information submittals and make Permit compliance less burdensome. In addition, the equipment conditions currently contain many of the information requirements that will be needed for leak detection systems (e.g., system descriptions). Incorporating leak detection system information requirements into existing equipment conditions will result in the creation of fewer new Permit conditions.

Ecology has decided to move the submission of the leak detection information from the secondary containment submittals to the equipment submittals in order to simplify the

Permit modification process in the future. This decision does not relieve the Permittees of meeting any of the existing or proposed draft Permit requirements. The only change is the timing of the submittals. The changes to the Permit, as a result of Comment 1, are listed below:

**Bullet 1:** Ecology deleted the proposed Condition III.10.E.9.b.x through xiii. Ecology chose to include the leak detection requirements in existing conditions to the extent possible. This was done to minimize the number of new conditions. Rather than moving the deleted conditions straight across to a new location, the leak detection requirements that were deleted in Condition III.10.E.9.b.x through xiii were added to Conditions III.10.E.d.vii, viii, x, and new Condition xiii.

**Bullet 2:** The suggested approach is a reasonable method of clarifying Ecology's intent in regard to containment building leak detection design and installation. The comment was incorporated as suggested.

**Bullet 3:** Proposed Conditions III.10.G.10.b.x through xiii deleted. Requirements moved to III.10.G.10.d.vii, viii, x, and new Condition III.10.G.10.d.xiii.

**Bullet 4:** Proposed Conditions III.10.H.5.b.x through xiii deleted. Requirements moved to III.10.H.5.d.vii, viii, x, and new Condition III.10.H.5.d.xiii.

**Bullet 5:** Proposed Conditions III.10.J.5.b.x through xiii deleted. Requirements moved to III.10.J.5.d.vii, viii, x, and new Condition III.10.J.5.d.xiii.

**Comment 2:** Due to the requested changes in Comment 1, please change the references in the following Permit conditions as indicated:

- In proposed condition III.10.E.5.b, change the reference from "III.10.E.9.b.xiii" to "III.10.E.9.d.xvi."
- In proposed condition III.10.E.9.b.i, change "ii through xiii" back to "ii through ix;" and in condition III.10.E.9.d.i, change "ii through xii" to "ii through xvi."
- In proposed condition III.10.E.9.e.xi.F, delete the added text "b and."
- In proposed condition III.10.G.5.b, change the reference from "III.10.G.10.b.xiii" to "III.10.G.10.d.xvi."
- In proposed condition III.10.G.10.b.i, remove the strikethrough on "~~ix~~" so that it reads "ii through xiii;" and in condition III.10.G.10.d.i, replace "ii-xi" with "ii through xvi."

- In proposed condition III.10.H.1.a.xiv, instead of referencing III.10.H.5.b.xiii, please reference III.10.H.5.d.xvi.
- In proposed condition III.10.H.5.b.i, change “ii through xiii” back to “ii through ix;” and in condition III.10.H.5.d.i, change “ii through xii” to “ii through xvi.”
- In proposed condition III.10.I.1.a.viii, change the reference from “III.10.H.5.b.xiii” to “III.10.H.5.d.xvi.”
- In proposed condition III.10.J.1.a.xiv, change the reference from “III.10.J.5.b.xiii,” to “III.10.J.5.d.xvi.”
- In proposed condition III.10.J.5.b.i, change “ii through xiii” back to “ii through ix,” and in condition III.10.J.5.d.i, change “ii through xii” to “ii through xvi.”
- In proposed condition III.10.K.1.a.viii, change the reference from “III.10.J.5.b.xiii” to “III.10.J.5.d.xvi.”

**Ecology Response:** The changes to the references described below are needed due to the Permit condition changes proposed in Comment 1:

**Bullet 1:** The reference in Condition III.10.E.5.b was deleted. The other two existing references are sufficient.

**Bullet 2:** The reference in Condition III.10.E.9.b.i was changed to ii through ix. The reference in Condition III.10.E.9.d.i was changed to ii through xiii.

**Bullet 3:** Text deleted as suggested. Other references do not apply.

**Bullet 4:** In Condition III.10.G.5.b., references to Condition III.10.G.10.b.vii and Condition III.10.G.10.b.xiii. were deleted.

**Bullet 5:** The reference in Condition III.10.G.10.b.i was changed to ii through ix. The reference in Condition III.10.G.10.d.i was changed to ii through xiii.

**Bullet 6:** The reference in Condition III.10.H.1.a.xiv to Condition III.10.H.1.5.b.xiii was deleted. The other two existing references are sufficient.

**Bullet 7:** The reference in Condition III.10.H.5.b.i was changed to ii through ix. The reference in Condition III.10.H.5.d.i was changed to ii through xiii.

**Bullet 8:** The reference in Condition III.10.I.1.a.viii was changed to Condition III.10.H.5.d.x.



**Bullet 9:** The reference in Condition III.10.J.1.a.xiv was changed to Condition III.10.J.5.d.x.

**Bullet 10:** The reference in Condition III.10.J.5.b.i was changed to ii through ix. The reference in Condition III.10.J.5.d.i was changed to ii through xiii.

**Bullet 11:** The reference in Condition III.10.K.1.a.viii was changed to Condition III.10.J.5.d.x.

**Comment 3: Tables III.10.E.E through H, III.10.G.C, III.10.H.C, III.10.I.C, III.10.J.C, and III.10.K.C:** It is not clear what kind of information would be placed in the column "Control Parameter" for a leak detection instrument. Please include "N/A" as an entry option for the items in this column.

**Ecology Response:** A control parameter is a design or operational limit that is monitored to ensure the proper and safe operation of the process. The actual control parameter for the leak detection system is dependent on the type of leak detection system that is ultimately selected. Examples of leak detection systems control parameters include liquid level, moisture, etc. The monitoring of this parameter will provide data to determine if there is a leak and trigger an appropriate response (e.g., remove liquid, repair failed containment, etc.).

**Comment 4: Table III.10.E.J, page 47:** It is not clear why the word "accessible" was included in row 1 column 3 "Sump Type/Nominal Operating Volume (gallons)." The accessibility of a sump can be ascertained by looking at a general arrangement drawing. The table format does not lend itself to repeating information regarding a sump's accessibility. Please delete reference to accessibility in the table.

**Ecology Response:** Ecology's intent was to differentiate between dry sumps in areas that would be accessible (e.g., C3 areas) and dry sumps in areas that are not accessible (e.g., black cells). The word accessible has been removed and a footnote 'a' has been added to indicate that this sump is routinely accessible for inspections and maintenance. The purpose was to make it plain which sumps are accessible and which are not.

#### **OTHER ECOLOGY CHANGES/CLARIFICATIONS:**

In addition to Permit changes resulting from public comments, Ecology has made the following clarifications:

- 1.) The leak detection system was added to the existing instrumentation requirements specified in the following conditions:

- Condition III.10.C.5.c.iv
- Condition III.10.E.5.b
- Conditions III.10.E.9.d,vii, vii and x
- Condition III.10.E.9.e.ix
- Condition III.10.G.5.b
- Conditions III.10.G.10.d.vii, viii, x, and xiii
- Condition III.10.G.10.e.x
- Condition III.10.H.1.a.xiii
- Conditions III.10.H.5.d.vii, viii, x, and xiii
- Conditions III.10.H.10.e.ix, and xvi
- Conditions III.10.I.1.a.vii and xvi
- Condition III.10.J.1.a.xvi
- Conditions III.10.J.5.d.vii, viii, x, and xiii
- Condition III.10.J.5.d.ix
- Conditions III.10.J.5.e.ix and xvi
- Condition III.10.K.1.a.xiii

2.) The following table titles were modified for readability:

- Tables III.10.E.E, F,G, and H
- Table III.10.G.B
- Table III.10.H.C
- Table III.10.I.C
- Table III.10.J.C
- Table III.10.K.C